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1 INTRODUCTION

This Technical Report sets out the following summary of the assessment and outcomes:

- The methodology used in the assessment,
- Impacts without mitigation,
- Proposed mitigation measures,
- Residual impacts,
- Cumulative impacts and transboundary impacts,
- Consideration of consultation replies from statutory agencies and relevant third-party representations,
- Consideration of any changes to the baseline data, relevant policy, guidance and legislation since the completion of the EIA in May 2021, and;
- Conclusions.

The Technical Report has been prepared by Stephen McAfee.

Stephen is a Technical Director with RPS and was responsible for preparing, drafting and delivering the air quality impact assessment contained in Chapter 12.0 Air Quality of the Environmental Statement ('the ES') for the NIE Networks' Curraghinalt 33kV Connection Project.

Stephen holds a BSc (Hons) in Geography and an MSc in Environmental Engineering. Stephen is an Associate Environmentalist with the Institute of Environmental Management & Assessment (MIEMA), a Full Member of the Institute of Air Quality Management (MIAQM) and a Chartered Member of the Institute of Environmental Sciences (CSci).

Stephen is a chartered scientist with over 20 years' experience primarily in the field of Environmental Impact Assessment (EIA), specialising in climate and air quality impact assessment and various roles in senior project management. Stephen also has acted as an expert witness and environmental expert at various public inquires and has provided specialist input into planning appeals, oral hearings and judicial review proceedings for both private and public sector clients.

This Technical Report should be read alongside Chapter 12.0 Air Quality of the Environmental Statement and Volume III Appendix 12.1 Draft Dust & Emissions Management Plan, previously submitted to the Department for Infrastructure ('DfI') on 1st June 2021.

Reference should also be made to the shadow Habitats Regulations Assessment (sHRA) (Annex II Shadow HRA of the ES) that was prepared by RPS to assist the competent authority in fulfilling its duties in accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended). The sHRA was submitted as an Annex II Shadow Habitats Regulations Assessment which considered changes in air quality as a result of traffic emissions.

Where the review of baseline data or any relevant change in legislation, policy or guidance results in a need to update environmental information this is clearly identified in this Technical Report.

2 METHODOLOGY

2.1 Introduction

All air quality assessment methodologies which have been employed to inform the planning application for the NIE Networks' Curraghinalt 33kV Connection Project are set out in Section 12.2 of Chapter 12 of the ES. By way of update, below is an outline of the changes in legislation, guidance and directives which have been updated since the time of ES publication in June 2021:

- In Section 12.2.1.11, the reference to *Part III of The Environment Order (Northern Ireland) 2002 (as amended)* should now read, *The Environment (Northern Ireland) Order 2002 (Amendment) Regulations (Northern Ireland) 2010*.
- In section 12.2.1.12, the reference to Local Air Quality Management Technical Guidance 2016 (LAQM.TG (16)) has been updated to Local Air Quality Management Technical Guidance 2022 (LAQM.TG (22)).
- In Section 12.2.7 and Table 6, the reference to the IAQM guidance document entitled IAQM Guidance on the Assessment of Dust from Demolition and Construction, 2014, has been updated to IAQM (2024): Guidance on the Assessment of Dust from Demolition and Construction.¹

Any additional assessments required in response to changes in the baseline data and/or with regard to updates to legislation, policy or guidance are set out in Section 5 of this Technical Report. For the convenience of the reader, the documents which contain the assessment methodologies that are employed in relation to Air Quality, are summarised below.

2.2 IAQM (2014): Guidance on the Assessment of Dust from Demolition and Construction

Holman et al (2014). IAQM Guidance on the Assessment of Dust from Demolition and Construction, Institute of Air Quality Management, London outlines that an assessment will normally be required where there is a 'human receptor' within 350 m of the boundary of the site; or 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s). The criteria are met in this instance and are screened in. For convenience these are set out below:

Table 1: Screening Criteria (IAQM, 2014)

Box 1: Screening Criteria

An assessment will normally be required where there is:

- a 'human receptor' within:
 - 350 m of the boundary of the site; or
 - 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).
- an 'ecological receptor' within:
 - 50 m of the boundary of the site; or
 - 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

¹ The document provides guidance for developers, their consultants and environmental health practitioners on how to undertake a construction impact assessment (including demolition and earthworks). The impacts of dust depend on the mitigation measures adopted. The emphasis in this document is therefore on classifying the risk of dust impacts from a site, which will then allow appropriate mitigation measures to be identified. This is a rewrite of previous guidance published in 2014, adopting the lessons learnt from the application of the previous guidance.

Chapter 12 of the ES uses the assessment procedure as set out in Section 5 and Section 7 of the IAQM Guidance on the Assessment of Dust from Demolition and Construction, namely the categorisation of receptors and subsequent impact assessment.

2.3 IAQM (2017) Land-Use Planning & Development Control: Planning for Air Quality

Table 12.5 of Chapter 12 IAQM Indicative Criteria for Requiring an Air Quality Assessment sets out the criteria for assessment under this IAQM guidance document. In this instance, none of the criteria are met – Please refer to Table 2 that details the indicative criteria. If none of the criteria are met, then there should be no requirement to carry out an air quality assessment for the impact of the proposed development on the local area and the impacts can be considered to have insignificant effects. Even where the effect is judged to be insignificant, consideration should be given to the application of good design and good practice measures – for this project, a series of mitigation measures have been detailed and are set out in this Technical Report.

Table 2: Indicative Criteria for Requiring an Air Quality Assessment (IAQM, 2017)

The development will:	Indicative Criteria to Proceed to an Air Quality Assessment ^a
1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors. (LDV = cars and small vans <3.5t gross vehicle weight).	A change of LDV flows of: - more than 100 AADT within or adjacent to an AQMA - more than 500 AADT elsewhere.
2. Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. (HDV = goods vehicles + buses >3.5t gross vehicle weight).	A change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
3. Realign roads, i.e. changing the proximity of receptors to traffic lanes.	Where the change is 5m or more and the road is within an AQMA.
4. Introduce a new junction or remove an existing junction near to relevant receptors.	Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.
5. Introduce or change a bus station.	Where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
6. Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20 m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).
7. Have one or more substantial combustion processes, where there is a risk of impacts at relevant receptors. NB. this includes combustion plant associated with standby emergency generators (typically associated with centralised energy centres) and shipping.	Typically, any combustion plant where the single or combined NO _x emission rate is less than 5 mg/sec ^a is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion. In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates. Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable.

^a As a guide, the 5 mg/s criterion equates to a 450 kW ultra low NO_x gas boiler **or** a 30kW CHP unit operating at <95mg/Nm³. Users of this guidance should quantify the NO_x mass emission rate from the proposed plant, based on manufacturers' specifications and operational conditions.

2.4 Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, LA105 Air Quality (HA, 2019) Air Quality – Local Assessment

This document is used for the assessment of impacts of air quality (on human receptors and ecological receptors) from road schemes and associated traffic emissions. Although the Proposed Development is not a road scheme, the DMRB document is a useful gauge in determining if an assessment is required and considers a number of criteria in relation to traffic volumes. The approach to considering an assessment (local assessment) or screening it out follows the guidance set out by the DMRB Sustainability and Environment, LA105 Air Quality (HA, 2019). Requirements for a local air quality assessment emanate from the following criteria being met:

- Road alignment change by 5m or more; or
- Daily traffic flows change by 1000 Annual Average Daily Traffic (AADT) or more; or
- Heavy Duty Vehicles (HDV) flows change by 200 AADT or more; or
- Change in speed band.

For this Proposed Development, none of the criteria are met. There is not predicted to be any significant change in traffic volumes (Please refer to Chapter 15 Traffic for further information on traffic movements from the Proposed Development) when the Proposed Development is operational when compared to the existing baseline scenario.

3 SUMMARY OF ASSESSMENT²

3.1 Baseline

Baseline information consisted of reference to Fermanagh & Omagh District Council and Derry City and Strabane District Council air quality information, DEFRA background air quality mapping and spreadsheets.

The Environment (NI) Order 2002 and subsequent Regulations place a duty on district councils to undertake regular review of air quality in their area. These district council reports fulfil the requirements of the Local Air Quality Management process as set out in the Environment (Northern Ireland) Order 2002, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The baseline used in the June 2021 ES are as follows:

- 2018 Updating and Screening Assessment Report, Fermanagh and Omagh District Council
- 2018 Updating and Screening Assessment, Derry City and Strabane District Council

These have since been updated and are summarised in Section 5 of this Technical Report. The updates to the baseline air quality environment reflected in the Council reports do not alter the baseline environment as presented in the ES and the conclusions made in the ES remain unchanged due to the negligible changes in monitored pollution concentrations.

3.2 Impacts without Mitigation

3.2.1 Construction

Activities that have the potential to result in fugitive emissions of dust from site construction works are pole erection excavations, rock breaking, excavation and stockpiling for the underground cable and track out from vehicles. Dust can be spread onto the public highway and along public access paths by vehicles entering and exiting the site. The level and distribution of construction dust emissions will vary according to factors such as the type of dust (for this Proposed Development, it includes dust from excavated soils and hard stand and substrata from road excavations), duration and location of dust-generating activity, weather conditions and the effectiveness of suppression methods.

For underground cable locations and any associated excavation on agricultural lands, top soil will be stripped and stockpiled within the identified working area, inside the red line, and will be re-used when re-instating the trench. Other excavated material will be stockpiled separately within the identified working area and will be re-used as back fill.

Regarding exhaust emissions from construction-related vehicles (contractors' vehicles, Heavy Goods Vehicles (HGVs), and other diesel-powered vehicles), these are unlikely to have a significant impact on local air.

There are c.26.9km of overhead line associated with this scheme and this is supported by single and double wooden pole sets. Access to the pole structures for construction, maintenance, and decommissioning will be via the public road network or existing accesses and there will be no additional works or modifications required to these accesses to accommodate construction works. The size of vehicles used during construction will be no larger than the type of vehicles which currently use these accesses, as set out in the Outline Construction Environmental Management Plan (oCEMP).

The types of construction vehicles which will be used during the construction period of the overhead line are 26T flatbed lorry with crane arm, a road tractor unit, 14T flatbed lorry with crane arm, 13T tracked excavator or a 20T tracked excavator.

² This section summarises the assessment undertaken in respect of the baseline as existing in May 2021 when the EIA was completed. Section 5 contains a review of any changes in the baseline data, cumulative & transboundary considerations, legislation, policy and guidelines and/or any other consideration that would trigger the need for Additional Environmental Information (AEI).

Therefore, the construction of the Overhead Line and underground cable will have an insignificant effect on the surrounding highway network due to the low volume of traffic associated with the construction phase and the low volume of background traffic.

The IAQM Land-Use Planning & Development Control: Planning For Air Quality document indicates that air quality assessments should include developments increasing annual average daily Heavy Duty Vehicle (HDV) traffic flows by more than 25³ within or adjacent to an AQMA⁴ and more than 100 elsewhere. The predicted construction traffic numbers (refer to Chapter 5 Traffic) do not exceed the aforementioned IAQM thresholds for any individual road during the construction phase of this project; therefore, construction-vehicle exhaust emissions have not been assessed specifically and have been scoped out of further assessment.

3.2.2 Operational Phase

There are no significant increases in traffic associated with the Proposed Development and as such the operational phase emissions can be screened out of the assessment. For this Proposed Development, as set out in this Technical Report, the operational phase impacts are determined as being “not significant”. Operation and maintenance traffic will only include light commercial vehicles and is estimated to consist of an average of 6 trips per year to various points along the route.

None of the screening criteria (set out in full in section 12.2.2 of ES Chapter 12.0) are met, thus not requiring an air quality assessment to be undertaken with regard to the operational phase of the Proposed Development. The screening criteria used in the ES chapter were from:

Environmental Protection UK EPUK & Institute of Air Quality Management (IAQM) Land-Use Planning & Development Control: Planning For Air Quality, January 2017.

The Design Manual for Roads and Bridges (DMRB) Sustainability and Environment, LA105 Air Quality (HA, 2019).

For this Proposed Development, as set out in Chapter 12.0 of the ES, the operational phase impacts are determined as being negligible and “not significant”.

3.2.3 Decommissioning Phase

Once operational, the overhead line will become a network asset and form part of the wider network. Decommissioning is not envisaged, however, should the overhead line be required to be decommissioned, the associated structures and materials would be recovered and items recycled, with the site returned to its original use. Decommissioning impacts will be the same or lesser than the impact of construction. Mitigation measures employed at the construction phase will be replicated at the decommissioning phase.

3.3 Proposed Mitigation Measures

3.3.1 Construction Phase

During the construction phase, there will be associated emission of air pollutants (including dust) into the atmosphere. In accordance with the IAQM guidance⁵, for those cases where the risk is assigned as ‘negligible’, no mitigation measures beyond those required by legislation are required. However, additional mitigation measures may be applied as part of good practice. These good practice measures have been set out in an Outline Dust and Emissions Management Plan (oDEMP), as detailed in the oCEMP (ES Volume III, Appendix 2.2 oCEMP).

³ Annual average daily Heavy Duty Vehicle (HDV) traffic flows

⁴ Air Quality Management Area - If a Local Authority identifies any locations within its boundaries where the Air Quality Objectives are not likely to be achieved, it must declare the area as an Air Quality Management Area (AQMA). The area may encompass just one or two streets, or it could be much bigger. The Local Authority is subsequently required to put together a plan to improve air quality in that area - a Local Air Quality Action Plan.

⁵ IAQM Guidance on the assessment of dust from demolition and construction, January 2024.

The principal activities that have the potential to result in fugitive emissions of dust from site construction works are pole erection excavations, rock breaking, excavation and stockpiling for the underground cable and track out from vehicles. Dust can be spread onto the public highway and along public access paths by vehicles entering and exiting the site. The proposed mitigation measures are set out below:

3.3.2 Communications

With respect to communications, the following will be implemented:

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This will be the Contractor Environmental Manager.
- All site personnel to be fully trained by the Contractor Environmental Manager in relation to dust control measures as presented in the Outline Dust & Emissions Management Plan (Outline DEMP) – contained within the oCEMP.
- Display the head or regional office contact information.

To be implemented before works commence on site and training given as appropriate by the Contractor Environmental Manager.

3.3.3 Site Management

With respect to site management, the following will be implemented:

- Record all dust complaints, identify cause(s), and record the measures taken to address the fugitive dust escape.
- Make the complaints record available to the relevant regulatory authorities when asked.

To be implemented during works by the appointed Contractor Environmental Manager.

3.3.4 Earthworks & Construction

With respect to earthworks and construction, the following will be implemented:

- Only use rock breaking equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Long-term stockpiles are not planned, and the Contractor Environmental Manager will ensure that stockpiles are managed and exist for the shortest possible time.
- Typically pole erection will be completed within a day, therefore, excavated material will not be left uncovered for more than a day. In the event that pole excavation should take longer than one day, excavated material will be covered with suitable waterproof material (heavy duty plastic sheeting or tarpaulin). In the event where rock is encountered, pole erection will not exceed three days (in the therefore, associated stockpiles will not be present in excess of three days).
- For underground cable locations involving excavation on agricultural lands, top soil will be stripped and stockpiled adjacent to the works (within the red line boundary) and will be re-used when reinstating the trench. Other excavated material will be stockpiled separately within the identified working area and will be re-used as back fill.

To be implemented during construction period by the appointed Contractor Environmental Manager.

3.3.5 Vehicle Movement and Vehicle Emissions

As with any construction site, there are associated vehicle movements, emissions and plant use. With respect to vehicle movements and vehicle emissions, the following will be implemented:

- An onsite speed limit (to be displayed) will be implemented by the main contractor that will be appropriate to the types of construction plant utilised (The IAQM guidance suggests to impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced roads and work areas – this will be implemented by the main contractor and adhered to by all site operatives).
- Vehicle operatives will ensure all vehicles switch off engines when stationary - no idling vehicles.
- No black smoke is emitted other than during ignition. Vehicle operatives will ensure that black smoke emissions are prevented during machinery use by visual inspection – any black smoke emitted other than start-up will be controlled by the vehicle being switched off and a maintenance check being made.
- All vehicles will hold current PSV certificates where required).
- All loads entering and leaving site are to be covered.
- Once the cable at an Active Work Location⁶ has been constructed, the material, machinery and equipment will be demobilised and will then be used at the next Active Work Location. Hand brushes will be used to clean the public carriageway or hard standing areas where required; mud will be brushed back into adjacent agricultural land.

To be implemented throughout by the appointed Contractor Environmental Manager.

3.3.6 Operational Phase

There is no requirement for mitigation relating to the operational phase. The development has been shown to be not significant in terms of air quality. Operation and maintenance traffic will only include light commercial vehicles and is estimated to consist of an average of 6 trips per year to various points along the 37.9km route.

3.3.7 Future Monitoring

There is no proposed future monitoring planned as part of the Proposed Development in terms of air quality. Owing to the linear nature of the project with isolated areas of activity which are limited in size, dust deposition monitoring is not considered necessary.

3.4 Residual Impacts

Residual effects have been assessed by reviewing the proposed mitigation measures against the potential effects outlined above. It is considered that all of the potential impacts will be managed appropriately through mitigation measures, good practice construction methods and sustainable design.

With the implementation of mitigation measures and best practice measures, the residual construction phase dust effects will not be significant.

⁶ Active Work Section and Active Work Location are defined in 2.4.2 Construction Concepts. Chapter 2 of the ES.

4 CONSULTATION RESPONSES AND SUBMISSIONS

4.1 Relevant Statutory Body Consultation Responses

The response (dated 01/05/2020) from Fermanagh and Omagh District Council Environmental Health (FODC) was as follows:

“Section 12 of the ES considers the potential for the proposed scheme to affect local air quality. Consideration is given to the national Local Air Quality Management (LAQM) and possible exceedances of any of the health limit values of any of the relevant pollutants of concern, particularly Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀), particularly from traffic sources. It is concluded that, as there are no significant increases in traffic associated with the proposed development, the operational phase impacts are determined as being “not significant” with no conflict with national or local air quality policies. The Environmental Health Service (EHS) concurred.

However, in relation to the construction phase of the development, there will be air quality and dust emissions to atmosphere for which mitigation measures shall be required.

Construction Dust Management

Chapter 12 of the ES, Air Quality and the associated Appendix 12.1, Draft Dust & Emissions Management Plan (Volume III), discusses the potential for dust emissions during the construction phase. Section 8, Dust Management of Appendix 2.2 OCEMP, suggests mitigation measures based on industry standard good practice for reducing dust and emissions from vehicles, in line with Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction Sites.

To ensure the amenity of proximate commercial and residential properties is not affected by dust emissions, the following condition is recommended:

Condition No. 1

“The mitigation measures detailed in Section 8, Dust Management, of Appendix 2.2 of the Outline Construction Environmental Management Plan, shall be implemented.”

Reason: To protect amenity against the impact of dust from construction works.”

A response received from DCSDC Environmental Health on 28th July 2021 reflects the same considerations as those from FODC Environmental Health.

4.2 Relevant Third Party Representations

There were no third party representations that specifically referenced air quality or dust.

5 REVIEW OF NEED FOR AEI IN RESPECT OF CHANGES IN BASELINE DATA, CUMULATIVE IMPACTS, TRANSBOUNDARY, LEGISLATION/GUIDELINES/POLICY, OTHER

5.1 Baseline

Baseline data has changed since the publication of the ES in June 2021. Those changes are summarised below. All of the highlighted updates and changes in baseline data will not alter the conclusions of Chapter 12 of the ES. The conclusions of the assessment as presented in Chapter 12 of the ES remain the same and the proposed mitigation measures are still applicable.

5.1.1 Fermanagh and Omagh District Council, 2024 Updating Screening Assessment

The following text is a summary of the findings of the report: *“By undertaking this Updating and Screening Assessment, Fermanagh and Omagh District Council have undertaken a review of potential sources of air pollution across the district in order to identify new sources, sources with increased emissions and areas to exposed to pollution sources where public exposure did not previously exist. This Update and Screening Assessment has been prepared in accordance with the Northern Ireland Local Air Quality Management Policy Guidance Document LAQM.PGNI (22).*

Fermanagh and Omagh District Council commenced a sampling regime for NO₂ and SO₂ using passive diffusion tubes in 2021, with the 2023 Progress Report identifying that there were no exceedances of the air quality objectives. In 2023 the sampling regime was temporarily halted with a decision made to direct resources to secure grant funding for automated monitoring equipment for measuring particulate matter emissions PM_{2.5} and PM₁₀. Fermanagh and Omagh District will recommence monitoring for NO₂ and SO₂ in 2024. It is anticipated that the automatic PM_{2.5} and PM₁₀ monitor secured under 2023 grant funding will be operational in August/September 2024⁷. A further bid will be progressed in 2024/25 to secure similar equipment for the Omagh Town Area.

The assessment has not identified any new sources that require progression to a detailed assessment. Fermanagh and Omagh District Council will continue to monitor pollutants associated with road traffic sources and the burning of domestic solid fuel.

The report has not identified any significant changes in emission sources within the Fermanagh and Omagh District Council area. There have been no new industrial installations and no new significant commercial, domestic or fugitive sources if emissions.”

5.1.2 Derry City and Strabane District Council, Progress Report 2024

The following text is a summary of the findings of the report: *“This report confirms that air quality within the Council area continues to meet the relevant air quality objectives at locations of relevant exposure, with the exception of locations within existing Air Quality Management Areas (AQMA). There were no exceedances of any objectives outside the existing AQMA boundaries.*

In the 2019 Progress report and the 2020 Progress Report, 2021 Updating and Screening Assessment and 2022 Progress Report, Council recommended that the Spencer Road AQMA should be revoked due to reduced pollutant concentrations over the previous number of years. DAERA subsequently advised that more recent monitoring results be compiled for this AQMA to determine if pollutant concentrations continued to decline: this has been shown to be the case and it is now hoped that this AQMA can be revoked. The remaining AQMAs are considered appropriate and should remain unchanged. The Buncrana Road AQMA had a slight exceedance (40.6 µg/m³ in 2022) of the Nitrogen Dioxide (NO₂) annual mean limit value of 40 µg/m³ with no

⁷ At the time of writing of this Technical Note – no further information was available in relation to monitoring funding.

exceedances in the two previous years. Council will continue to monitor trends at this location. There is no requirement for a Detailed Assessment for any pollutant.

The report has not identified any significant changes in emissions sources within Derry City and Strabane District Council area. There have been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions.”

5.2 Cumulative Impacts

It is important to consider effects, not in isolation, but cumulatively, as this may show that individually analysed impacts can become significant when they are added together, or when they occur alongside other effects. Cumulative effects can occur at different temporal and spatial scales. The spatial scale can be local, regional or global, while the frequency or temporal scale includes past, present and future impacts on a specific environment or region.

The assessment of impacts due to the generation and dispersion of dust and particulate matter during the construction phase has been undertaken using the relevant assessment methodology, as published by the IAQM. The assessment has considered potential impacts at ‘human receptors’ within 350m of the site, and within 50m of the route used by construction vehicles on the public highway, up to 500m from the site entrance. Beyond these distances the impacts of dust soiling and increased particulate matter are not likely to give rise to significant effects.

Adverse cumulative impacts due to emissions of dust and particulate matter can arise where the construction phase of one or more committed development corresponds with that of the Proposed Development. Any such cumulative impacts would reduce with distance away from a neighbouring site so that beyond 500m, the cumulative impacts will be negligible, regardless of the performance of the construction phase mitigation that will be implemented for a proposed development. For the construction phase, in the unlikely event that an overlap of projects occurred, the cumulative effects would be temporary and of short duration and still insignificant.

The residual cumulative dust effects would be expected to be negligible with the proposed dust mitigation measures in place as described in this Technical Report. With the implementation of the proposed package of mitigation measures, the residual construction dust effects will not be significant.

As the operational phase of the Proposed Development produces negligible vehicle trips, inclusion of committed developments near to the Development have been scoped out of the assessment within Chapter 15 Transport and therefore Chapter 12 Air Quality. No likely significant cumulative effects are anticipated once the Development is operational.

Cumulative projects have been considered with regard to the air quality assessment. All cumulative projects considered for the project are detailed in Volume III, Appendix 1.4.

The residual cumulative dust effects are predicted to be negligible with the proposed dust mitigation measures in place, as described in Chapter 12 of the ES. With the implementation of the proposed package of mitigation measures, the residual construction dust effects will not be significant.

5.3 Transboundary Impacts

The pollutants Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Volatile Organic Compounds (VOC) and ammonia (NH₃) are responsible for long range transboundary air pollution such as acidification, eutrophication and ground level ozone pollution. The significance of the transboundary impact of the proposed development located in Northern Ireland to air pollution levels in the Republic of Ireland is considered to be negligible and not significant due to the nature of the proposed development, the associated negligible air quality impacts and the separation distance between the two entities.

6 CONCLUSIONS

Chapter 12 of the ES considered the air quality impacts from the construction phase and once the Proposed Development is fully operational. Once operational, the overhead line will become a network asset and form part of the wider network. None of the screening criteria are met which require an air quality assessment to be undertaken. For this Proposed Development, as set out in this chapter, the operational phase impacts are determined as being negligible and “not significant”.

For the construction phase (and decommissioning), an important consideration is dust. The mitigation measures provided within this assessment will ensure that the risk of adverse dust effects is reduced to a level categorised as “not significant”.

Dust pollution is not considered to be a likely significant effect given the nature of the development. Where any small and localised impacts arise, dust control measures will be employed as set out in Chapter 12 of the ES and Section 8, Dust Management of Appendix 2.2 OCEMP.

There are no significant increases in traffic associated with the Proposed Development and as such the operational phase emissions can be screened out of the assessment. For this Proposed Development, as set out in this chapter, the operational phase impacts are determined as being “not significant”.

The significance of the transboundary impact of the proposed development located in Northern Ireland to air pollution levels in the Republic of Ireland is considered to be negligible and not significant. Following the implementation of mitigation, the proposed development will have a negligible impact on local air quality.

For convenience a summary table is presented below. This is Table 12.11: Summary of Likely Environmental Effects on Air Quality from the published ES.

Receptor	Sensitivity of receptor	Description of Effect	Duration	Magnitude	Significance	Significant / Not significant
Construction phase						
Surrounding receptors	High	Fugitive dust & Emissions (Nitrogen Dioxide & Particulates) from plant and construction machinery	Short term	Medium	Moderate adverse	Not Significant
Surrounding receptors (ecological)	Low	Fugitive dust & Emissions (Nitrogen Dioxide & Particulates) from plant and construction machinery	Short term	Low	Slight Adverse	Not Significant
Operational phase						
Surrounding receptors (residential)	High	Emissions (Nitrogen Dioxide & Particulates) from traffic	Long Term	Negligible	Negligible	Not Significant
Surrounding receptors (ecological)	Low	Emissions (Nitrogen Dioxide & Particulates) from traffic	Long Term	Negligible	Negligible	Not Significant